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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/621,714	07/18/2003	Tomio Hirano	240464US6	1566

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EXAMINER

CHEVALIER, ALICIA ANN

ART UNIT PAPER NUMBER

1772

DATE MAILED: 09/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/621,714

Applicant(s)

HIRANO ET AL.

Examiner

Alicia Chevalier

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 May 2006 and 22 June 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 and 18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

RESPONSE TO AMENDMENT

1. Claims 1-7 and 18 are pending in the application, claims 8-17 have been cancelled.

REJECTIONS

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 103

3. Claims 1, 3-7 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hogan (U.S. Patent No. 4,781,792) in view of Yoneda et al. (U.S. Patent No. 5,314,731).

Regarding Applicant's claim 1, Hogan discloses a glass for an automobile (*col. 5, lines 5-7*) comprising a glass substrate (*title*) having a cut side (*etching side, col. 7, lines 11-32*), and a depth of a mark on the cut side face is 0.06 mm or more (*col. 7, lines 32-33*).

The preamble "for a touch panel" is deemed to be a statement with regard to the intended use and is not further limiting in so far as the structure of the product is concerned. In article claims, a claimed intended use must result in a *structural difference* between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. MPEP § 2111.02.

The limitation "at least partially formed by cutting with laser light radiation" is a method limitation and does not determine the patentability of the product, unless the process produces unexpected results. The method of forming the product is not germane to the issue of

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patentability of the product itself, unless Applicant presents evidence from which the Examiner could reasonably conclude that the claimed product differs in kind from those of the prior art.

MPEP 2113.

Hogan fails to disclose that the surface roughness of the cut side face of the glass substrate is 50 nm or less.

Yoneda discloses window glass for automobiles (*col. 1, lines 14-19*). Yoneda teaches that substantial scorching or a fine roughness, i.e. high surface roughness, on the surface of a glass lowers its basic function and scatters light on its surface making it difficult to secure the field of view, and consequently there will be a problem in securing safety (*col. 1, lines 46-52*).

Hogan and Yoneda are analogous because both disclose glass for windows in automobiles.

The exact surface roughness of the glass is deemed to be a result effective variable with regard to the scattering of light. It would require routine experimentation to determine the optimum value of a result effective variable, such as surface roughness, in the absence of a showing of criticality in the claimed surface roughness. *In re Boesch*, 205 USPQ 215 (CCPA 1980), *In re Woodruff*, 16 USPQ2d 1934, 1936 (Fed. Cir. 1990). One of ordinary skill in the art would have been motivated by disclosure of Yoneda to minimize the surface roughness in order to avoid substantial scattering of light. One would have been motivated to minimize the surface roughness because it would allow better field of view and thus secure safety.

Regarding Applicant's claim 3, Hogan discloses that the glass substrate has no crack and pulverized powder at the cut side face, since the reference is silent about cracks and pulverized powder.

Regarding Applicant's claim 4, Hogan discloses that the depths of the mark and another mark on a second cut side face of the glass substrate are different, the second cut face being different from the first cut side face (*figure 5*).

Regarding Applicant's claims 5 and 7, Hogan fails to disclose that the difference in depths of the laser marks is different by 2% or more between on the first cut side face and on the second cut side face or the thickness of the glass substrate is 0.25 mm or more and 0.7 mm or less. Note: The Examiner has constructed "0.25 mm or more and 0.7 mm or less" to mean equal to or greater than 0.25 mm and less than or equal to 0.7 mm.

It would have been an obvious matter of design choice to change the thickness or depth of glass or marks, since a modification would have involved a mere change in size of the glass or marks. A change in size or shape is generally recognized as being within the level of ordinary skill in the art, absent unexpected results. MPEP 2144.04 (I) and (IV).

Regarding Applicant's claim 6, the mark formed on the cut side face of the glass substrate is deemed to have a predetermined depth from a first principle surface, and another laser mark is formed on a second cut side face of the glass substrate and deemed to have a predetermined depth from a second principal surface, the second side face being different from the first cut side face and the second principal surface is a back surface of the first principal surface (*figure 5*).

Regarding Applicant's claim 18, Hogan discloses that the cut side is an outer peripheral edge of the glass substrate (*figure*).

4. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hogan in view of Yoneda as applied above, and further in view of Chiba et al. (U.S. Patent No. 6,287,996).

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Hogan and Yoneda are relied upon as described above.

Hogan and Yoneda fail to disclose that the glass substrate has a strength of 45 kgf or more and 90 kgf or less on a static load test.

Chiba discloses a glass comprising a glass substrate with a strength of 45 kgf or more and 90 kgf or less based on a static load test (*col. 11, lines 13-18*), which does not deteriorate (*col. 2, lines 40-45*).

Hogan, Yoneda and Chiba are analogous because they all disclose glass for windows in automobiles.

It would have been obvious to one of ordinary skill in the art at the time of the invention to have a glass with a strength of 45 kgf or more and 90 kgf or less based on a static load test in the Hogan and Yoneda as taught by Chiba in order to insure the strength will not deteriorate.

ANSWERS TO APPLICANT'S ARGUMENTS

5. Applicant's arguments in the response filed June 22, 2006 regarding the 35 U.S.C. rejection over Hogan in view of Yoneda et al. of record have been carefully considered but are deemed unpersuasive.

Applicant argues that the etched side of the glass in Hogan would by all accounts be considered the principles surface of the glass sheet and would not consider the cut side substantially perpendicular to the principle surface.

First, the principle surface is merely defined as the side of the glass substrate without marks. Second, from figures 1-5 of Hogan the principle surface, i.e. the surface without cutting, appears to be "substantially" perpendicular to the cut side face, i.e. the surface with the cutting.

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Applicant further argues that Hogan does not teach a depth of 0.06 mm or more.

The examiner apologizes for the incorrect column and line for this limitation. Hogan discloses in col. 5, lines 3-13 an etching depth of a few hundredths inches for a shallow etch however larger are possible depending on the desired etch depth. Therefore, the etch is 0.25 mm or larger depending on the desired etch depth.

Applicant argues that Yoneda does not teach the features lacking from the teaching of the Hogan reference.

Applicant's arguments regarding Yoneda and the depth of the marks and the cut side versus perpendicular surface is moot since Yoneda was not relied upon to disclose those limitations.

Applicant further argues that Yoneda is concerned with the surface treatment of a principal surface and not with a cut surface and the reference does not disclose the specific surface roughness claimed.

First, Applicant has not pointed out where in the reference Yoneda is disclosing treating the principal surface versus the cut surface. Second, the examiner was using the background information from the specification of Yoneda which does not specify with side of the glass. Third, generally discloses that high surface roughness are bad, that would include both surfaces. Finally, applicant has not shown criticality in the claimed surface roughness

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alicia Chevalier whose telephone number is (571) 272-1490. The examiner can normally be reached on Monday through Friday from 8:00 am to 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon, can be reached on (571) 272-1498. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

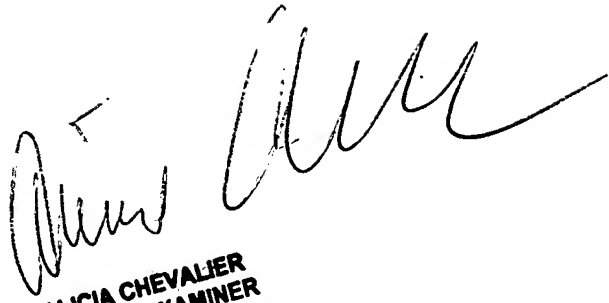
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ac

9/4/06

A handwritten signature in black ink, appearing to be "AC", located to the right of the date "9/4/06".A large, stylized handwritten signature in black ink, located above the name "ALICIA CHEVALIER".

**ALICIA CHEVALIER
PRIMARY EXAMINER**